

opening a first gas manifold inlet valve coupled between a first regulator and a gas manifold;

regulating a flow rate of a flow of a first process gas through said first gas manifold inlet valve to said gas manifold with said first regulator;

opening a second gas manifold inlet valve coupled between a second regulator and said gas manifold;

regulating a flow rate of a flow of a second process gas through said second gas manifold inlet valve to said gas manifold with said second regulator;

opening a gas manifold exhaust valve coupled between a third regulator and an exhaust; and

regulating a flow rate of a flow of a third process gas through said gas manifold exhaust valve to said exhaust with said third regulator during said regulating a flow rate of a flow of a first process gas and said regulating a flow rate of a flow of a second process gas.

36. A method comprising:

opening a first gas manifold inlet valve coupled between a first regulator and a gas manifold;

regulating a flow rate of a flow of a first process gas through said first gas manifold inlet valve to said gas manifold with said first regulator;

opening a second gas manifold inlet valve coupled between a second regulator and said gas manifold;

regulating a flow rate of a flow of a second process gas through said second gas manifold inlet valve to said gas manifold with said second regulator;

opening a gas manifold exhaust valve coupled between a third regulator and an exhaust;

regulating a flow rate of a flow of a third process gas through said gas manifold exhaust valve to said exhaust with said third regulator during said regulating a flow rate of a flow of a first process gas and said regulating a flow rate of a flow of a second process gas;

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closing said first gas manifold inlet valve and said second gas manifold inlet valve to stop said flow of said first process gas and said flow of said second process gas to said gas manifold; and

redirecting said flow of said third process gas from said exhaust to said gas manifold.

37. The method of Claim 36 wherein said redirecting comprises;

closing said gas manifold exhaust valve; and

opening a third gas manifold inlet valve coupled between said third regulator and said gas manifold.

38. A method comprising:

opening a first gas manifold inlet valve coupled between a first regulator and a gas manifold;

regulating a flow rate of a flow of a first process gas through said first gas manifold inlet valve to said gas manifold with said first regulator;

opening a gas manifold exhaust valve coupled between a second regulator and an exhaust;

regulating a flow rate of a flow of a second process gas through said gas manifold exhaust valve to said exhaust with said second regulator, said regulating a flow rate of a flow of a second process gas occurring during said regulating a flow rate of a flow of a first process gas;

closing said first gas manifold inlet valve to stop said flow of said first process gas to said gas manifold; and

redirecting said flow of said second process gas from said exhaust to said gas manifold comprising:

closing said gas manifold exhaust valve; and

opening a second gas manifold inlet valve coupled between said second regulator and said gas manifold... .